PLUMBING LEGEND

1 LOWDING	LEGEND
PIPING	
	SANITARY SEWER DOMESTIC COLD WATER DOMESTIC HOT WATER VENT
O———	PIPE DOWN PIPE UP VENT THRU ROOF
C.O. }	PIPE WITH CLEANOUT DIRECTION OF FLOW IN PIPE FLOOR DRAIN WITH P-TRAP
OR OR	FULL PORT BALL VALVE CIRCUIT BALANCING VALVE
——III——	UNION OR FLANGE DIRECTION OF PITCH
>	STRAINER (W/ FULL PORT BLOW-OFF VALVE) WALL HYDRANT
	HOSE BIBB
1///	DENOTES EXISTING EQUIPMENT TO BE REMOVED
#	DEMOLITION PLAN NOTE
	NEW WORK PLAN NOTE

NEW WORK PLAN NOTE

	ABBF	REVIATIONS
	ABV	ABOVE
	AFF	ABOVE FINISHED FLOOR
	CLG.	CEILING
	CO	CLEANOUT
	CW	DOMESTIC COLD WATER
	DN	DOWN
	ETR	EXISTING TO REMAIN
	FCO	FLOOR CLEANOUT
	FD	FLOOR DRAIN
	GPH	GALLONS PER HOUR
	GPM	GALLONS PER MINUTE
	HB	HOSE BIBB
	HP	HORSEPOWER
	HW	DOMESTIC HOT WATER
	MAX.	MAXIMUM
	MFR.	MANUFACTURER
	MIN.	MINIMUM
	PDI	PLUMBING & DRAINAGE INSTITUTE
	SAN	SANITARY SEWER
	TMV	THERMOSTATIC MIXING VALVE
)	TYP.	TYPICAL
	V	VENT
	VRV	VACUUM RELIEF VALVE
	VTR	VENT THRU ROOF
	W	SANITARY WASTE
	WH	WALL HYDRANT
	WHA	WATER HAMMER ARRESTOR

GENERAL NOTES

- A. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE UNIFORM STATEWIDE BUILDING CODE, INCLUDING REFERENCED CODES AND STANDARDS AND IN ACCORDANCE WITH MANDATES OF THE LOCAL BUILDING OFFICALS.
- B. THE GENERAL ARRANGEMENT AND LOCATIONS OF PIPING, FIXTURES, ETC. ARE INDICATED BY THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE THEREWITH, WITH THE EXCEPTION OF SUCH CHANGES AS MAY BE REQUIRED ON ACCOUNT OF OTHER TRADES. CONTRACTOR SHALL COORDINATE WORK WITH INSTALLATION OF OTHER SUBCONTRACTORS.
- C. PLUMBING WORK SHALL BE COORDINATED WITH THE CONTRACTOR AS TO SCHEDULING, DIMENSIONING AND LOCATION OF EQUIPMENT.
- D. MAJOR ITEMS ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
- E. SUBSTITUTION FOR SPECIFIED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
- F. ALL REQUIRED WALL OR FLOOR OPENINGS SHALL BE COORDINATED WITH THE CONTRACTOR.
- G. ALL PIPING SHALL BE ABOVE CEILING UNLESS INDICATED OTHERWISE.
- H. EQUIPMENT SHALL BE WIPED CLEAN, REMOVING ALL TRACES OF OIL, DIRT, OR PAINT SPOTS.
- I. PROVIDE SUPPORTS TO RIGIDLY ATTACH ALL EQUIPMENT, APPURTENANCES AND PIPE AS REQUIRED FOR SUPPORT. PRIOR TO INSTALLATION OF HANGERS AND INSERTS, THE CONTRACTOR SHALL COORDINATE LOCATIONS AND EQUIPMENT TO MINIMIZE CONFLICTS WITH OTHER BUILDING SYSTEMS.
- J. CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL EQUIPMENT INDICATED TO BE FURNISHED BY OTHERS.
- K. ALL PIPE OF THE SAME SIZE SHALL BE OF THE SAME MATERIAL.
- L. SLOPE ALL DRAIN LINES 1/4 INCH PER FOOT MINIMUM FOR SIZES LESS THAN 4 INCHES, SLOPE 1/8 INCH PER FOOT SIZES 4 INCHES AND LARGER UNLESS INDICATED OTHERWISE BY INVERTS ON DWGS.
- M. SOIL, WASTE AND VENT PIPING LOCATED BELOW GRADE SHALL BE MINIMUM 2 INCHES.
- N. VENTS SHALL EXTEND 12 INCHES ABOVE ROOF. ROOF FLASHING SHALL BE COORDINATED BY THE CONTRACTOR.
- O. DOMESTIC HOT AND COLD WATER PIPING SHALL BE 1/2 INCH SIZE UNLESS INDICATED OTHERWISE.
- P. BALL VALVES MAY BE USED IN LIEU OF GATE VALVES 2 INCHES OR SMALLER.
- Q. ALL EXPOSED FIXTURE SUPPLIES AND WASTE LINES SHALL BE CHROME PLATED.
- R. INSULATE ANY STORM WATER PIPING IN EXISTING BUILDING INCLUDING BOTTOM SIDE OF ROOF DRAINS.

PLUMBING SPECIFICATIONS

- 1.0 GENERAL
- 1.01 THE CONTRACT DOCUMENTS APPLY TO THESE SPECIFICATIONS.
- 1.02 PROVIDE ALL NECESSARY LABOR AND MATERIALS FOR THE WORK SHOWN ON THE DRAWINGS, WHICH INCLUDES INSTALLATION OF ALL PLUMBING PIPING AND FIXTURES.
- 1.03 WORK SHALL MEET REQUIREMENTS OF LOCAL BUILDING CODES AND ORDINANCES. APPLICABLE REQUIREMENTS OF THE VUSBC, NFPA, AND REQUIREMENTS OF LOCAL
- 1.04 SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:
- A. PLUMBING FIXTURES & EQUIPMENT
- B. INSULATION
- 1.05 PLACING IN SERVICE:
- A. BEFORE BEING PLACED INTO OPERATION, ALL EQUIPMENT REQUIRING PREOPERATIONAL ATTENTION SHALL BE SERVICED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE SPECIFICATIONS AND THE MANUFACTURER'S RECOMMENDATIONS.
- 2.0 PRODUCTS
- 2.01 PIPE AND PIPE FITTINGS
- A. COPPER TUBE TYPE L: ANSI/ASTM B88.
- PVC PIPE: SCH. 40, GRADE PVC 2116: ASTM D1785 AND ASTM D2241. CELLULAR CORE PVC SHALL NOT BE ALLOWED.
- STEEL PIPE: SCH. 40, ASTM A53, TYPE E OR S, GRADE B, CARBON STEEL WITH BUTT WELDED, ASTM A234 STEEL FITTINGS OR ASTM A338 MALLEABLE IRON FITTINGS.
- D. NO HUB CAST IRON
- 2.02 PIPING SYSTEM SHALL BE SUPPORTED IN ACCORDANCE WITH ANSI B31.1 AND APPLICABLE MANUFACTURERS STANDARDIZATION SOCIETY (MSS) STANDARDS "POWER PIPING" SO AS TO MAINTAIN REQUIRED PITCH OF LINES, PREVENT VIBRATION AND PROVIDE FOR EXPANSION AND CONTRACTION MOVEMENT.

2.03 PIPING SCHEDULE

SERVICE	SIZE	PIPE TYPE	FITTING TYPE	VALVE TYPE	NOTES	
DOMESTIC COLD WATER SUPPLY	ALL SIZES	TYPE L COPPER HARD DRAWN	WROUGHT COPPER NO-LEAD SOLDER	BALL	1,2	
DOMESTIC HOT WATER SUPPLY AND RETURN	ALL SIZES	TYPE L COPPER HARD DRAWN	WROUGHT COPPER NO-LEAD SOLDER	BALL	1,2	
SANITARY AND VENT	ALL SIZES	SCHEDULE 40 PVC	SOLVENT WELDED			

NOTES:

- 1. SERIES 82LF BRONZE APOLLO 3 BY CONBRACO.
- 2. REFER TO INSULATION SPECIFICATION FOR FINISH.

2.04 INSULATION SCHEDULE

SERVICE	TYPE INSUL.	THICKNESS INCHES	FINISH IN CONCEALED AREAS	FINISH IN EXPOSED AREAS	NOTES					
(1) PIPING										
DOMESTIC HOT WATER SUPPLY AND RETURN	GLASS FIBER	1.0	INTEGRAL FIRE RETARDANT ASJ	NO FINISH ON INSULATION	1					
DOMESTIC COLD WATER	GLASS FIBER	1.0	INTEGRAL FIRE RETARDANT VAPOR BARRIER ASJ	NO FINISH ON INSULATION	1					
EXPOSED DOMESTIC WATER AND SANITARY BELOW LAVATORY					2					

- 1. APPLY FLEXIBLE GLASS FIBER INSULATION IN CONCEALED AREAS ONLY. 2. SEE PLUMBING FIXTURE SCHEDULE ON DRAWING POO2 INSTALL TRAP AND SUPPLY INSULATION KIT - TRUBRO MODEL
- 3.0 EXECUTION
- SUBJECT ALL DOMESTIC WATER PIPING SYSTEMS TO A HYDROSTATIC PRESSURE TEST AT 1-1/2 TIMES OPERATING PRESSURE OR 100 PSIG, WHICHEVER IS GREATER, MEASURED AT THE LOWEST POINT IN THE SYSTEM FOR A PERIOD OF FOUR HOURS.
- PLUMBING DRAINAGE AND VENT SYSTEMS INSIDE THE BUILDING SHALL BE WATER TESTED UPON COMPLETION OF THE ROUGH PIPING INSTALLATION AND PROVED WATERTIGHT.
- INSTALL ISOLATION VALVES IN HOT AND COLD PIPING AT EACH BRANCH CONTAINING PLUMBING FIXTURES AND AT LOCATIONS TO ISOLATE MAIN SECTIONS OF THE BUILDING.

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	MISCELLANEOUS EQUIPMENT SCHEDULE								
MARK	DESCRIPTION								
EWH-1	ELECTRIC WATER HEATER - RHEEM LIGHT-DUTY COMMERCIAL ELECTRIC WATER HEATER MODEL ELD52-TB NOMINAL 50 GAL TANK TYPE WATER HEATER WITH TWO NON-SIMULTANEOUS 4500 WATT ELEMENTS, SUITABLE FOR 240V/1PH/60HZ POWER. PROVIDE WITH DRAIN PAN AND POTABLE WATER BLADDER TYPE EXPANSION TANK WITH MINIMUM ACCEPTANCE OF 1 GALLON								
HWRP-1	HOT WATER RECIRCULATION PUMP - GRUNDFOS MODEL ALPHA2 15-55SF WITH 120V/1PH/60HZ ECM MOTOR AND WETTED PARTS SUITABLE FOR POTABLE HOT WATER RECIRCULATION. PUMP SHALL HAVE AUTOADAPT CONTROL AND CAPACITY OF 3 GPM AT 8 FT OF HEAD PRESSURE.								
TMV-1	THERMOSTATIC MIXING VALVE: LEONARD MODEL TM-5208-LF-DT HIGH LOW SYSTEM WITH 3/4" INLETS & 1" OUTLET								
EWC-1	ELECTRIC WATER COOLER - ELKAY EZSTL8WSCX HANDS-FREE HIGH/LOW WATER COOLER WITH BOTTLE FILLER MODIFIED WITH EZO SENSO ELECTRONICS ON BOTH HIGH AND LOW COOLERS. PROVIDE WITH STAINLESS STEEL PANELS AND EZWSR.								
WHA	WATER HAMMER ARRESTOR, JOSAM SERIES 75000-S ABSORBOTRON TYPE NO. 75000-S 75001-S 75002-S 75003-S 75004-S PDI AA A B C D FIXTURE UNIT RATING 1 1-11 12-32 33-60 61-113								
FD-1	FLOOR DRAIN WITH TRAP SEAL DEVICE.								
WCO	WALL CLEANOUT - ZURN Z1446 SERIES, DURA-COATED CAST IRON WITH POLISHED STAINLESS STEEL COVER.								

MISCELLANEOUS EQUIPMENT SCHEDULE

MARK

EWH-1

HWRP-1

TMV-1

EWC-1

FD-1

WCO

PDI

3 GPM AT 8 FT OF HEAD PRESSURE.

WATER HAMMER ARRESTOR, JOSAM SERIES 75000-S

FLOOR DRAIN WITH TRAP SEAL DEVICE.

ABSORBOTRON TYPE NO. 75000-S 75001-S 75002-S 75003-S 75004-S

FIXTURE UNIT RATING 1 1-11 12-32 33-60 61-113

DESCRIPTION

ELECTRIC WATER HEATER - RHEEM LIGHT-DUTY COMMERCIAL ELECTRIC WATER HEATER MODEL ELD52-TB NOMINAL 50 GAL TANK TYPE WATER HEATER WITH TWO NON-SIMULTANEOUS 4500 WATT ELEMENTS, SUITABLE FOR 240V/1PH/60HZ POWER.

PROVIDE WITH DRAIN PAN AND POTABLE WATER BLADDER TYPE EXPANSION TANK WITH MINIMUM ACCEPTANCE OF 1 GALLON

HOT WATER RECIRCULATION PUMP - GRUNDFOS MODEL ALPHA2 15-55SF WITH 120V/1PH/60HZ ECM MOTOR AND WETTED

PARTS SUITABLE FOR POTABLE HOT WATER RECIRCULATION. PUMP SHALL HAVE AUTOADAPT CONTROL AND CAPACITY OF

ELECTRIC WATER COOLER - ELKAY EZSTL8WSCX HANDS-FREE HIGH/LOW WATER COOLER WITH BOTTLE FILLER MODIFIED WITH

THERMOSTATIC MIXING VALVE: LEONARD MODEL TM-5208-LF-DT HIGH LOW SYSTEM WITH 3/4" INLETS & 1" OUTLET

EZO SENSO ELECTRONICS ON BOTH HIGH AND LOW COOLERS. PROVIDE WITH STAINLESS STEEL PANELS AND EZWSR.

AA A B C D

WALL CLEANOUT - ZURN Z1446 SERIES, DURA-COATED CAST IRON WITH POLISHED STAINLESS STEEL COVER.

BUILDING 410 SCHEDULES

	FIXTURE SCHEDULE AND SPECIFICATIONS										
DESIG	ESIG FIXTURE MANUFACTURER & MODEL SIZE SUPPLY FITTINGS & STOPS TRAP CARRIER REMARKS & ACCESSORIES						CONNECTION SIZES				
DESIG	FIXTURE	MANUFACTURER & MODEL	SIZE	SUPPLY FITTINGS & STOPS	IRAP	CARRIER	REMARKS & ACCESSORIES	WASTE	НОТ	COLD	
P-1	WATER CLOSET	AMERICAN STANDARD 701AA109 CLEAN ACTIVATE TOUCHLESS RIGHT HEIGHT ELONGATED	ADA	-	INTEGRAL	FLOOR MOUNTED BOTTOM OUTLET	1.28 GPF WITH OPEN-FRONT PLASTIC SEAT WITH EVERCLEAN FINISH AND ACCESSIBLE SIDE SENSOR FLUSH CONTROL AND MANUAL FLUSH BUTTON	3"	-	1/2"	
P-2	URINAL	AMERICAN STANDARD 6590.001	ADA	-	INTEGRAL	WALL MOUNTED	0.5 GPF WITH SLOAN ROYAL SENSOR ACTIVATED FLUSHOMETER MODEL 186-0.5 SMO WITH MANUAL OVERRIDE	2"	-	3/4"	
P-3	LAVATORY	AMERICAN STANDARD 0356.421	ADA	3/8" ANGLE STOPS	1 1/4" 17GA P-TRAP	WALL MOUNTED	FAUCET: ZURN Z6950-XL-S-W2-E, 1.5 GPM HANDS FREE FAUCET WITH ZURN GATEWAY WIRELESS COMMUNICATION AND CHROME DRAIN GRID STRAINER	1 1/4"	1/2"	1/2"	
P-4	BREAK ROOM SINK	ELKAY/DAYTON D11719	ADA	3/8" ANGLE STOPS	1 1/2" 17GA P-TRAP	COUNTER MOUNTED DROP-IN	FAUCET: ZURN Z812B4-XL GOOSENECK WATER SENSE WITH WRIST BLADE HANDLES AND WITH ELKAY LK35B DRAIN	1 1/2"	1/2"	1/2"	
P-5	SERVICE SINK	FIAT TSB3010	24 X 24	-	3" P-TRAP	FLOOR MOUNTED	FAUCET: T&S BRASS MODEL B-0665-BSTR PROVIDE WITH HOSE AND BRACKET STAINLESS STEEL MOP HANGER AND MODEI MODEL MSG2424 WALL GUARDS	3"	1/2"	1/2"	

NOTE: REFER TO ADDITIONAL BIDDING DOCUMENTS, INCLUDING THE INVITATION TO BID, FOR INSTRUCTIONS ON REPRESENTING THE COST OF CERTAIN PLUMBING FIXTURES ON THE BID SHEET.

BUILDING 414 SCHEDULES

	FIXTURE SCHEDULE AND SPECIFICATIONS										
DESIG	FIXTURE	MANUFACTURER & MODEL	SIZE	SUPPLY FITTINGS & STOPS	TRAP	CARRIER	REMARKS & ACCESSORIES		CONNECTION SIZES		
DESIG	TIXTORL	WANDI ACTORER & WODEL	SIZL	30172111111103 & 31013	IIVAF	OAMMEN	NEWAKKO & ACCESSORIES	WASTE	HOT	COLD	
P-1	WATER CLOSET	AMERICAN STANDARD 3461.001 WITH EVERCLEAN ELONGATED	ADA	-	INTEGRAL	FLOOR MOUNTED BOTTOM OUTLET	WITH SLOAN ROYAL OPTIMA 1.28 GPF MODEL 111 SMO-1.28-TMO FLUSHOMETER PROVIDE WITH OPEN-FRONT PLASTIC SEAT WITH EVERCLEAN FINISH	3"	-	1/2"	
P-2	URINAL	AMERICAN STANDARD 6590.001	ADA	-	INTEGRAL	WALL MOUNTED	0.5 GPF WITH SLOAN ROYAL SENSOR ACTIVATED FLUSHOMETER MODEL 186-0.5 SMO WITH MANUAL OVERRIDE	2"	-	3/4"	
P-3	LAVATORY	AMERICAN STANDARD 0356.421	ADA	3/8" ANGLE STOPS	1 1/4" 17GA P-TRAP	WALL MOUNTED	FAUCET: ZURN Z6950-XL-S-W2-E, 1.5 GPM HANDS FREE FAUCET WITH ZURN GATEWAY WIRELESS COMMUNICATION AND CHROME DRAIN GRID STRAINER	1 1/4"	1/2"	1/2"	
P-4	BREAK ROOM SINK	ELKAY/DAYTON D11719	ADA	3/8" ANGLE STOPS	1 1/2" 17GA P-TRAP	COUNTER MOUNTED DROP-IN	FAUCET: ZURN Z812B4-XL GOOSENECK WATER SENSE WITH WRIST BLADE HANDLES AND WITH ELKAY LK35B DRAIN	1 1/2"	1/2"	1/2"	
NA - SEE PLANS	SERVICE SINK (FAUCET ONLY)	T&S BRASS MODEL B-0665-BSTR	-	BUILT-IN SERVICE STOPS	-	WALL MOUNTED	INSTALL FAUCET TO SERVE SERVICE SINK TO BE REUSED AS INDICATED ON DRAWINGS	-	1/2"	1/2"	

NOTE: REFER TO ADDITIONAL BIDDING DOCUMENTS, INCLUDING THE INVITATION TO BID, FOR INSTRUCTIONS ON REPRESENTING THE COST OF CERTAIN PLUMBING FIXTURES ON THE BID SHEET.

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PLUMBING
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